In the Claims:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

18. (currently amended) A method of simulating a missile by means of a missile simulator during testing of an aircraft which includes a weapon system for controlling missiles with which the aircraft may be equipped , the method comprising:

   i) generating a target seeker command position for a target seeker in the missile, whereby the target seeker is commanded to adopt a predetermined position;

   ii) receiving the target seeker command position at the weapon system;

   ii) iii) simulating the behavior of the missile in a computer model to generate an actual value signal adapted to the weapon systems system;

   iii) iv) generating in the weapon system a trouble signal from a deviation between the target seeker command position and the actual value signal;

   iv) v) using the trouble signal as a control signal for the target seeker; and

   v) vi) repeating steps ii) - iv) iii) - v).

19. (previously presented) The method in accordance with claim 18, wherein the trouble signal is measured continuously and wherein sampled values for a vector indicating error in amplitude (A) and error in phase angle (φ), which represent a difference between a vector S^C corresponding to the target seeker command position and a vector S_O corresponding to the actual value signal, are determined and sent to the computer model in the missile simulator.

20. (previously presented) The method in accordance with claim 19, wherein for each trouble signal, the computer model determines a corresponding actual value signal.

21. (previously presented The method in accordance with claim 20, wherein for each trouble signal the computer model determines a new vector S^C including an amplitude and a phase angle of the new target seeker command position.

22. (previously presented) The method in accordance with claim 20, wherein a time-continuous actual value signal is reproduced from a time-discrete vector from the computer model.